

NWS Form E-5 (04-2006) (PRES. BY NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) Burlington VT
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR October 2012
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE /s/ Kimberly G. McMahon, GF, WFO BTW DATE November 15, 2012

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

☒ An X inside this box indicates that no flooding occurred within this hydrologic service area.

A wet autumn continued for October 2012 across the Burlington, VT Hydrologic Service Area, with several areas receiving over seven inches of rainfall for the month (figure 1). The Burlington, VT HSA had four days in the month of October receiving over one inch of rain each day. An active weather pattern brought low pressure systems and associated fronts across the Northeast U.S. on average, every two to four days, which resulted in approximately two-thirds of the days in October having precipitation affect the Burlington, VT HSA. The bulk of precipitation came with 2 storms, one large low pressure system October 19-20 (figure 3) and Hurricane Sandy/hybrid storm on October 30-31.

Rivers and streams were running near normal to slightly above normal, and saw significant rises due to a large cut-off low pressure system that affected the northeast October 19th through 20th. Northeastern New York and most of Vermont received one to three inches of rainfall as a result (figure 4). This system did not produce any flooding, but significant rises were seen at multiple river gauges, with 3 sites reaching action stage (see table 1). Two gauges on the Ausable River and one gauge on Winooski River can be seen cresting above action stage on October 20, 2012 (figures 5 & 6). ESSV1 gauge in Essex, VT became inoperable (figure 8). During this event, a Flood Warning was issued at 4:04 UTC for the East Branch of the Ausable River at Ausable Forks for Saturday, October 20, 2012. The river crested below flood stage and the warning was cancelled in the early afternoon of October 20, 2012.

About a week later, as Hurricane Sandy approached from the mid-Atlantic coast, a Flood Watch was issued for the western Champlain Valley and central Vermont into southern Vermont on Saturday afternoon, October 27, 2012. This watch was in effect from Monday evening, October 29 through Wednesday morning October 31, but cancelled later as the storm remained well to the south. With rainfall amounts generally less than the Oct 20th event and over a longer duration (figures 9), river level rises were less significant than from the storm about a week earlier as can be seen on the hydrographs in figures 5 through 7.

**Significant River Crests
October 2012
WFO Burlington VT**

Location	ID	Date	Time (UTC)	Crest Stage (ft)	Flood Stage (ft)
Ausable R. near Au Sable Forks, NY	AUSN6	10/20/2012	6:30	6.16	7.0
E. Br. Ausable R. at Ausable Forks, NY	ASFN6	10/20/2012	5:30	6.72	7.0
Winooski R. near Essex Jnc, VT	ESSV1	10/20/2012	14:00	10.18	12.0

Table 1.

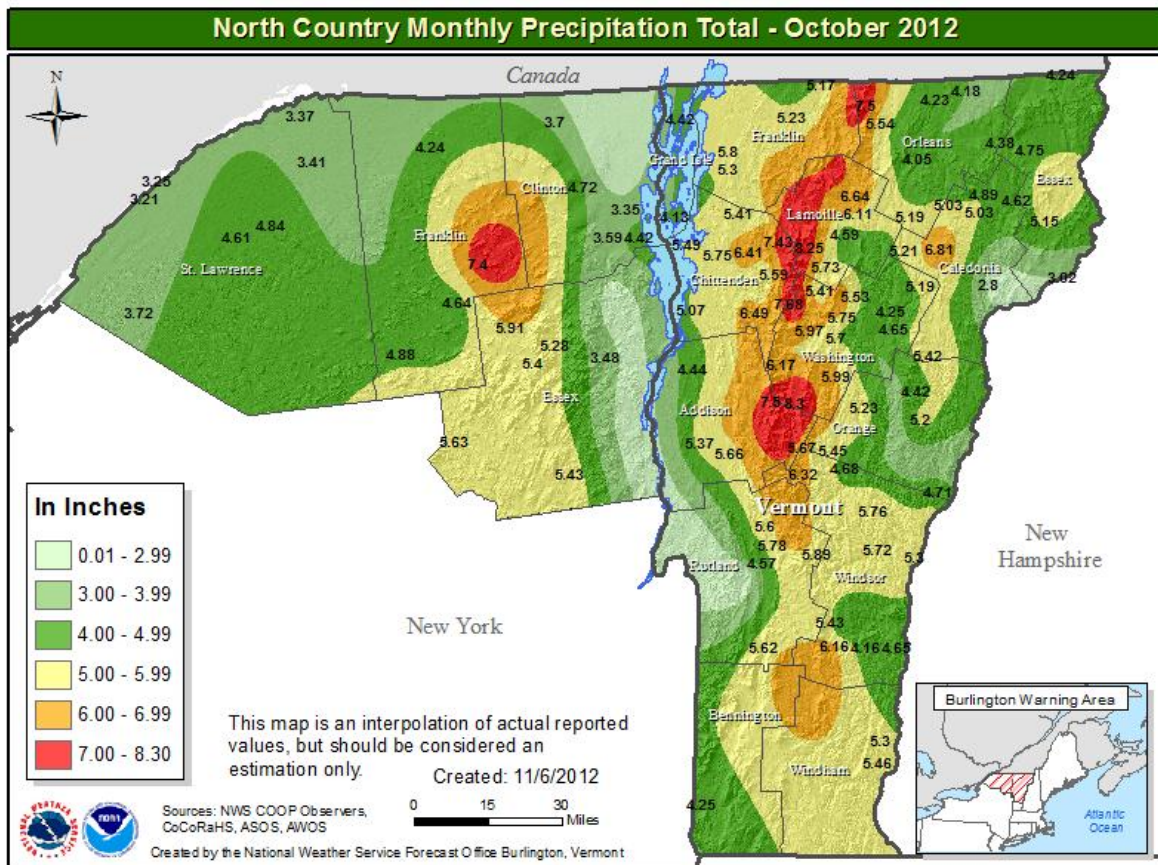


Figure 1. Monthly total precipitation for October 2012 across NWS WFO Burlington, VT HSA.

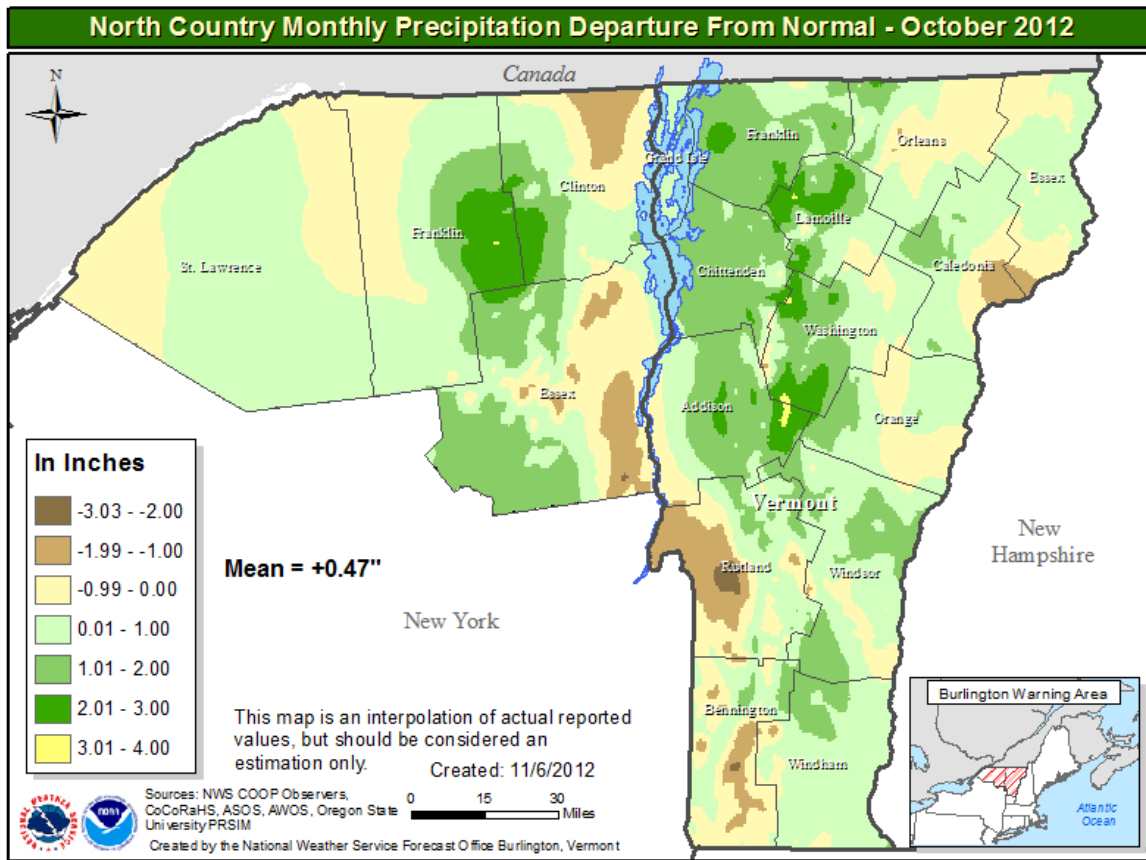
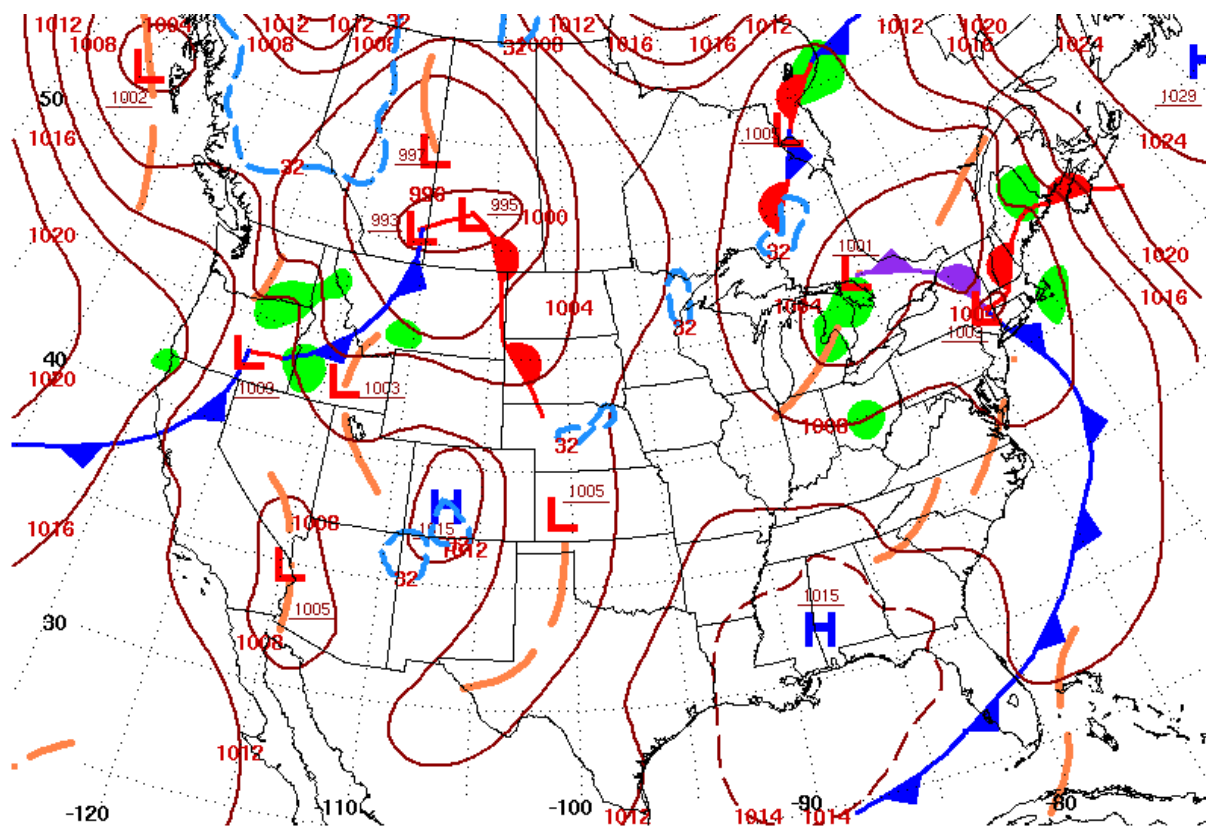


Figure 2. Monthly precipitation departure from normal for October 2012 across NWS WFO Burlington, VT HSA.



Surface Weather Map at 7:00 A.M. E.S.T.

Figure 3. Surface chart of low pressure system that affected the Northeast October 19-20 2012, producing 1-3 inches of rainfall across the NWS WFO Burlington, VT HSA.

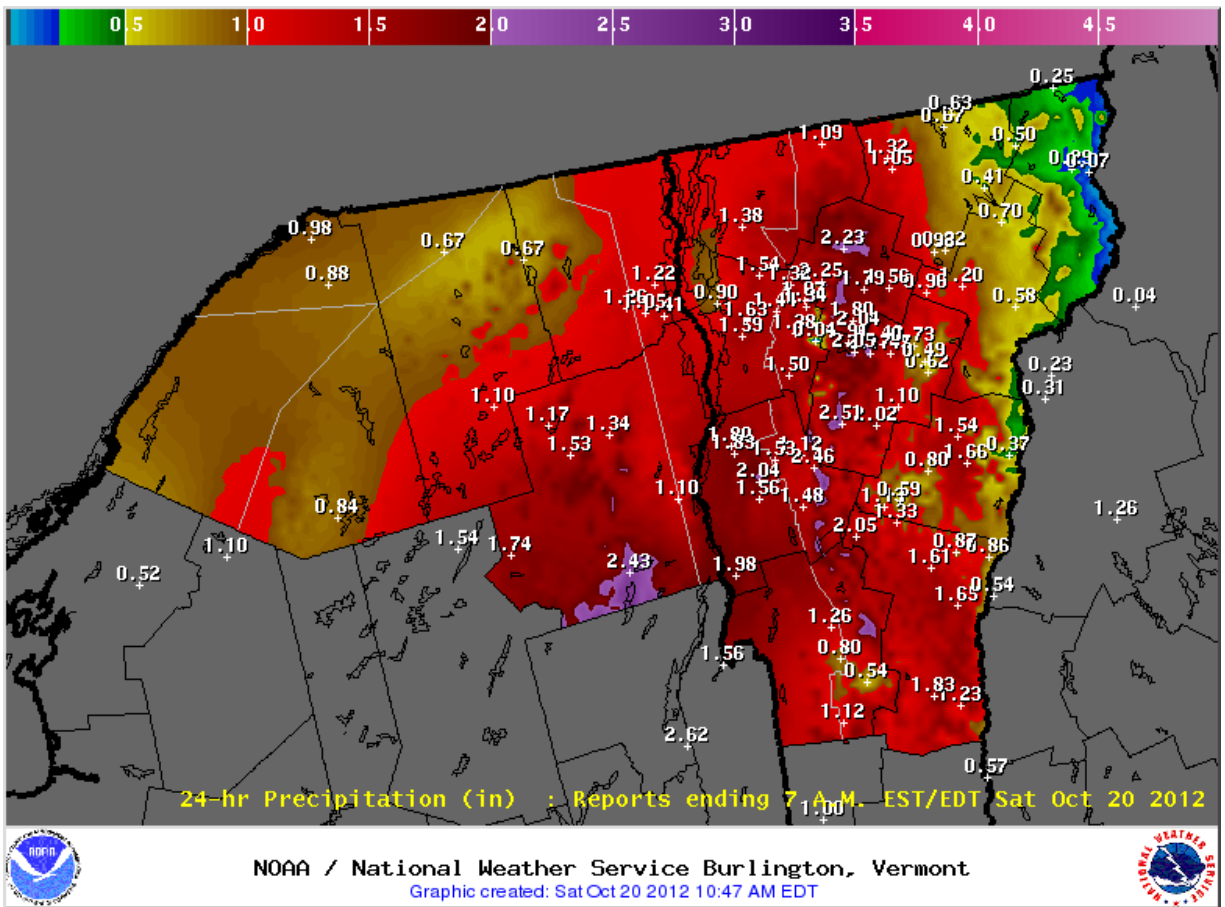


Figure 4. 24 hour rainfall total ending 7 a.m. EDT on October 20, 2012.

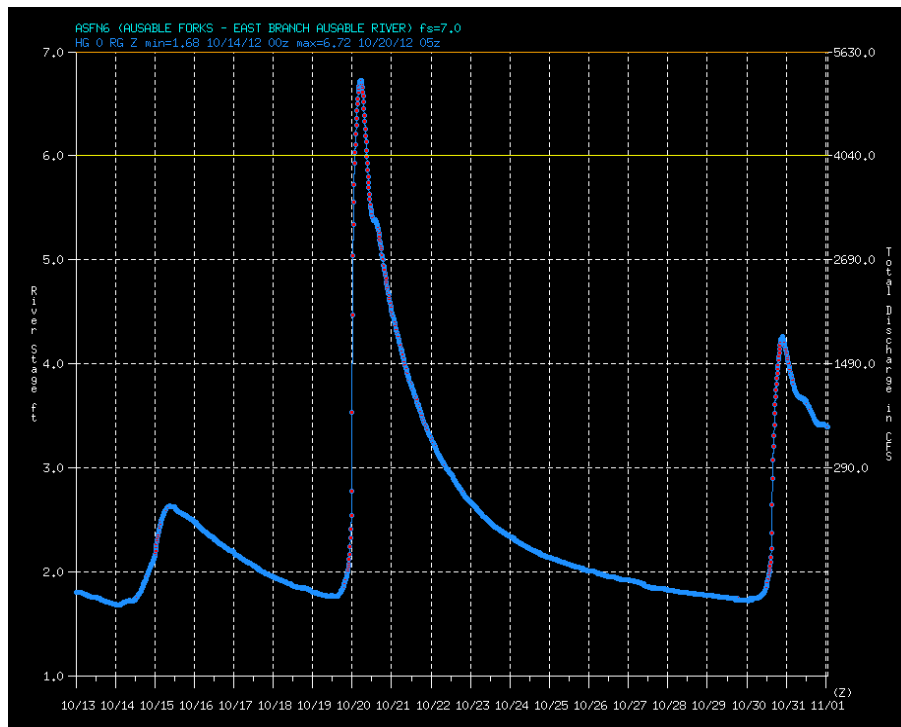


Figure 5. ASFN6 rapidly rises above action stage on October 20, 2012.

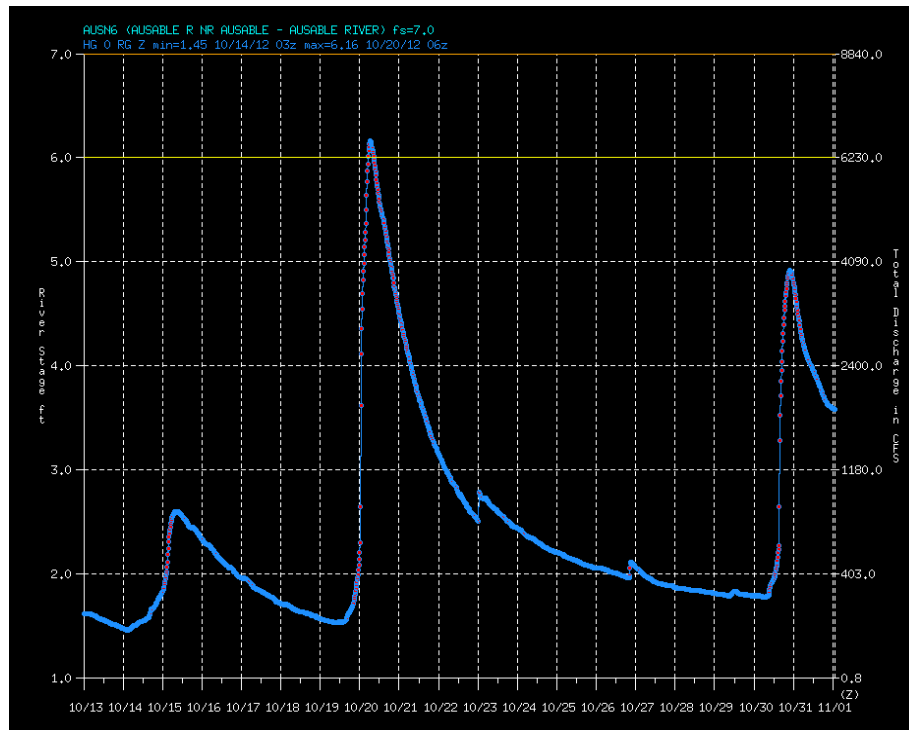


Figure 6. AUSN6 crests just above action stage on October 20, 2012.

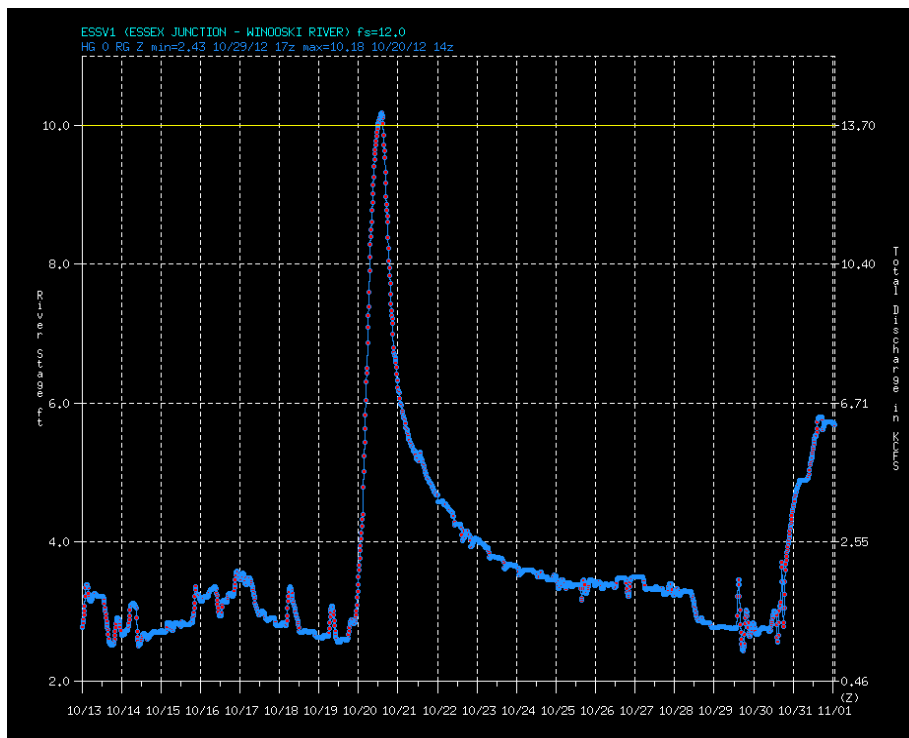


Figure 7. ESSV1 crests just above action stage on October 20, 2012.

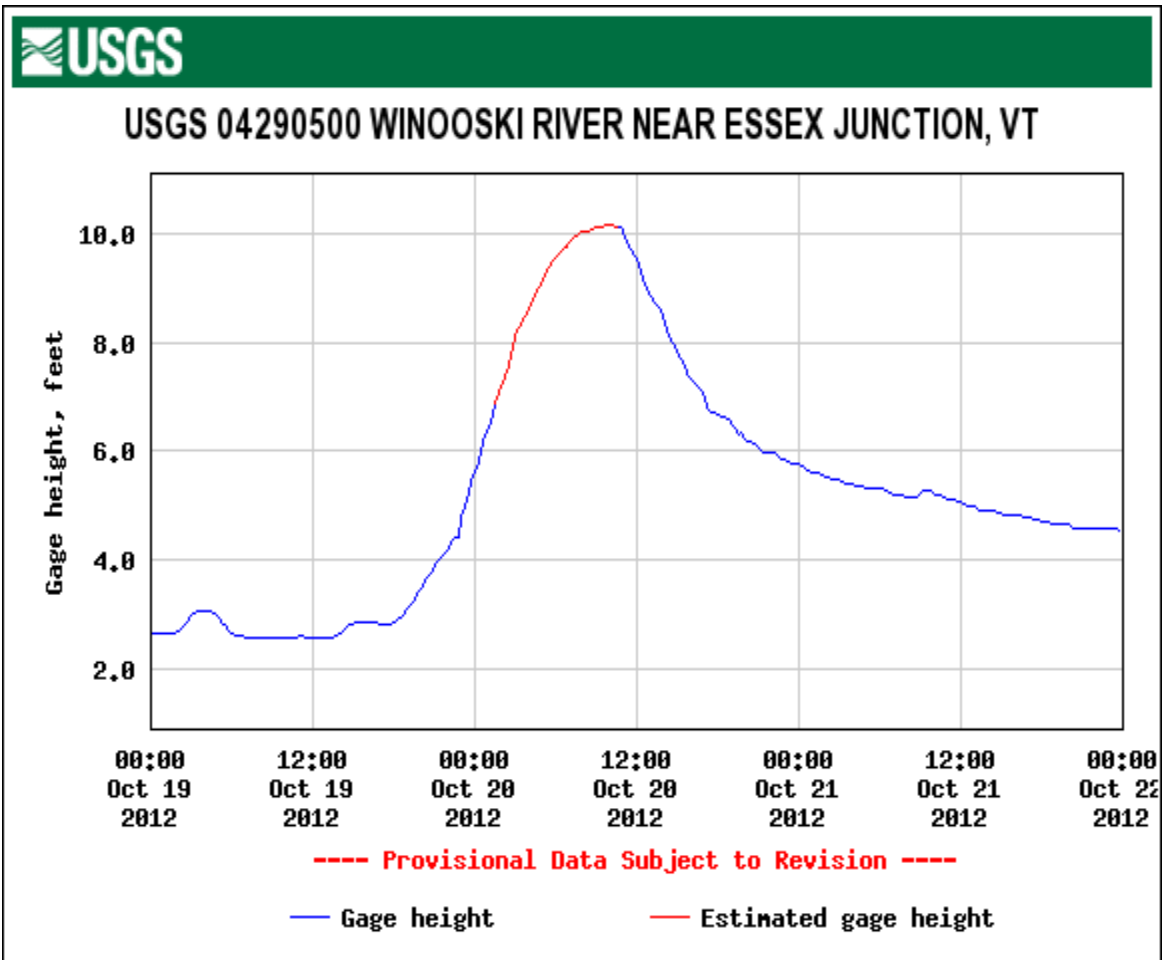


Figure 8. ESSV1 gauge on the Winooski River near Essex Junction, VT became inoperable as the river was rising the night of October 19, 2012. The gauge returned to service the morning of October 20, 2012.

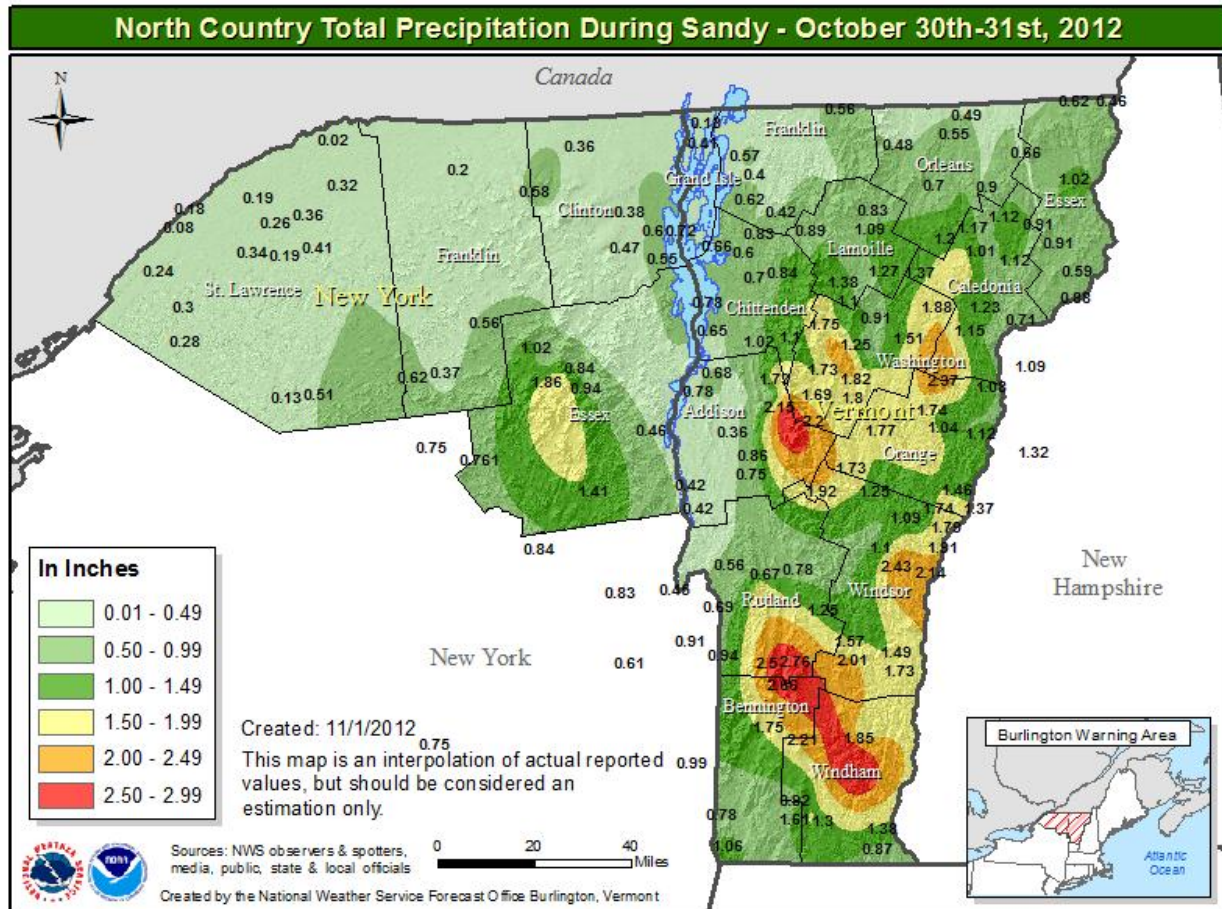


Figure 9. Two day precipitation total from Sandy as of October 31, 2012 from NWS WFO Burlington, VT Public Information Statement. The bulk of the rainfall produced by Sandy over the North Country precipitated over two inches by the morning of Tuesday, October 30. Areas affected with the heaviest rainfall correspond with the Green Mountains and Adirondacks, indicating orographic lift was a factor.